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REMARKS

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicants assert that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

Status of Claims

Claims 1 – 17 are pending in the application. Claims 1 – 17 have been rejected. No claims have been amended.

CLAIM REJECTIONS

Response to the Examiner's Response to Arguments

In the previous Office Action, Applicants noted "that Ghani et al.'s goal is 'faster congestion indication without modifying the TCP protocol'" (Col 3, lines 33 - 34) while the invention recited in the claims provides acceleration of data delivery". As such, the present invention teaches a "transmission unit (claims 1 and 5)", the "transmission of packets (claim 9)" and "a transmitting network device (claim 13)." The present invention teaches apparatuses and methods for the transmission of data packets. Thus, the present invention manages outgoing (i.e. transmitted) data streams. The present invention may be applied on top of or inside any network protocol, TCP or otherwise.

In contrast, Ghani et al ("Ghani") teach a data receiver. Moreover, it is a TCP data receiver. Ghani is specific to the TCP protocol and its management of incoming (i.e. received) TCP data streams.

As noted by the Examiner, Ghani teaches a TCP receiver 410 that receives data packets from a TCP source 430. As recited in Ghani's abstract: "The invention includes a link layer entity for receiving data packets from a source and forwarding the data packets to a

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forward data link, the link layer entity storing the received data packets in a data packet buffer until the data packets depart the link layer entity and are forwarded to the forward data link and an acknowledgment pacing device, coupled to the link layer entity, for pacing acknowledgement packets to be sent to the source in response to receiving the data packets from the source. " (emphasis added)

Ghani further emphasizes this with its claims: "an acknowledgment pacing device for pacing acknowledgement packets to be sent to a source in response to receiving data packets from the source (Ghani, claim 1)." Ghani teaches an apparatus and method for receiving data transmissions; not for transmitting data.

As quoted above, Ghani teaches "pacing acknowledgement packets to be sent to a source." However, Ghani teaches that such packets are generated within the context of a receiver; not within a "transmission unit". Acknowledgement packets are messages sent along a connection back channel as part of a control process for the receiving of data. Accordingly, such messages are always sent by receiving units, and not by transmission units as the Examiner implies.

Moreover, as can be seen from the above discussion, acknowledgement packets are different from data packets. In his Response to Arguments, the Examiner stated otherwise:

"It is recognized that the acknowledgement packets disclosed in Ghani are interpreted as one form of packets that conveys acknowledgement data. As such, acknowledgment packets are considered as one type of data packets. The differentiation between ACK and data packets in Ghani merely indicates that the data packets returned by the TCP receiver 410 are acknowledgement data while the data packets transmitted from the TCP source 430 to the TCP receiver 410 are other types of data packets other than ACK packets. As such, Ghani does not teach away from operating on data packets." (emphasis added)

Applicants respectfully traverse the Examiner's assertion that "acknowledgment packets are considered as one type of data packets." This is not how the terms are used in the art. In the art, data packets are sent by transmission units and acknowledgement packets, as implied by the name, are sent to acknowledge receipt of data packets.

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This is also how Ghani uses the terms. Claim 1 of Ghani recites: “acknowledgement packets to be sent to a source in response to receiving data packets from the source.” Ghani defines acknowledgement packets as packets to be sent to acknowledge the receipt of data packets. Moreover, the distinction is maintained throughout Ghani’s specification. The packets transmitted by TCP source 430 are data packets. The packets returned by TCP receiver 410 are acknowledgement packets.

Applicants therefore respectfully assert that Ghani teaches away from operating on data packets. Ghani teaches operating on acknowledgement packets which Ghani et al consider to be significantly different than incoming data packets.

35 U.S.C. § 102 Rejections

In the Office Action, the Examiner rejected claims 1 – 17 under 35 U.S.C. § 102(b), as being anticipated by Ghani (US 6,215,769). Applicants respectfully traverse this rejection in view of the remarks that follow.

In Fig. 4, Ghani shows TCP source 430 sending data packet 440 to TCP receiver 410, and receiver 410 sending back acknowledgement (ACK) 420 to TCP source 430. Ghani, in Fig. 5, shows receiver 410 aggregating ACK packets and sending an aggregated package (the ACK 420) back to TCP source 430. As can be seen in Fig. 4, Ghani differentiates between ACK packet 420 and data packet 440 and Ghani only aggregates ACK packets.

Thus, Ghani does not aggregate "at least two small messages received from an upper layer into a data packet" (claim 1) since Ghani aggregates only ACK packets.

Not only does Ghani not teach nor suggest operating on data packets, Ghani teaches away from such a teaching in its differentiation between ACK packets and data packets.

Furthermore, Ghani teaches a receiver and not a “transmission unit (claims 1 and 5)”, the “transmission of packets (claim 9)” and “a transmitting network device (claim 13).”

Therefore, Ghani cannot anticipate claims 1, 5, 9 and 13.

Accordingly, Applicants respectfully assert that independent claims 1, 5, 9 and 13 are allowable. Claims 2 – 4, 6 – 8, 10 – 12 and 14 – 17 depend from, directly or indirectly, claims 1, 5, 9 and 13 and therefore include all the limitations of those claims. Therefore,

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Applicants respectfully assert that claims 2 – 4, 6 – 8, 10 – 12 and 14 – 17 are likewise allowable. Accordingly, Applicants respectfully request that the Examiner withdraw the rejections to claims 1 - 17.

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fees associated with this response to Deposit Account 09-0468.

Respectfully submitted,

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